In the Claims:

1. (original) Electromagnetic actuator with two electromagnets arranged at a spacing distance relative to one another, and an armature (1) that is movable back and forth along a stroke travel distance (Im) between the electromagnets (2, 3) against the force of two springs (61, 62) acting against each other, characterized in that the springs (61, 62) are pre-stressed in such a manner, so that the same energy (A1, A2) is stored in both springs (61, 62) in connection with a compression of the springs (61, 62) that is prescribed by the stroke travel distance (Im) of the armature (1).

2. (original) Electromagnetic actuator according to claim 1, characterized in that at least one of the springs (61, 62) comprises a non-linear spring characteristic curve (F1).

3. (original) Electromagnetic actuator according to claim 2, characterized in that the spring characteristic curve (F1) of at least one of the springs (61, 62) comprises a maximum value (F13) at a position (Ix) of the armature (1) spaced away from the two electromagnets (2, 3).

Claims **4 to 6** (canceled).

7. (currently amended) Method for the adjusting of an electromagnetic actuator with two electromagnets (2, 3) arranged at a spacing distance relative to each other, and

an armature (1) movable back and forth along a stroke travel distance between the electromagnets (2, 3) against the force of two springs (61, 62) acting against one another, characterized in that, for each spring (61, 62) the variation ~~progression~~ (F1, F2) of the spring force is measured, which results if the respective spring (61, 62) is compressed by a spring travel distance corresponding to the stroke travel distance (Im) of the armature (1), that in connection with the measured ~~progressions~~ variations (F1, F2) of the spring forces, the energy (A1, A2) is determined, which is stored in the respective spring (61, 62) due to the compression thereof, and that the pre-stressing (F10, F20) of one or both springs (61, 62) is set in such a manner so that the same energy (A1, A2) is stored in both springs (61, 62).

8. (previously presented) Electromagnetic actuator according to claim 1, characterized in that setting means (71, 72) for setting the pre-stressing of the springs (61, 62) are provided.

9. (currently amended) Electromagnetic actuator according to claim 8, characterized in that measuring means for measuring the ~~progressions~~ variations of the spring forces of the springs (61, 62) in connection with the compression of the springs over the stroke travel distance are provided.

10. (currently amended) Electromagnetic actuator according to claim 9, characterized in that control means for controlling the setting means in accordance with the measured ~~progressions~~ variations of the spring forces are provided.

11. (new) An electromagnetic actuator comprising:

two electromagnets spaced apart from one another with a spacing distance therebetween;

an armature arranged to be movable back-and-forth along said spacing distance between said two electromagnets; and

two springs that are coupled to said armature and that respectively exert oppositely directed spring forces onto said armature;

wherein said two springs are pre-stressed so that the same total spring energy is stored in each one of said two springs when said springs are respectively maximally compressed through a spring travel by moving said armature through said spacing distance between said two electromagnets.

12. (new) The electromagnetic actuator according to claim 11, wherein said two springs respectively have different spring characteristics that respectively define a variation of said spring force of a respective one of said springs over said spring travel.

13. (new) The electromagnetic actuator according to claim 12, wherein a rest position of said armature with said two electromagnets de-energized is not at a geometric center of said spacing distance between said two electromagnets.

14. (new) The electromagnetic actuator according to claim 11, wherein a rest position of said armature with said two electromagnets de-energized is not at a geometric center of said spacing distance between said two electromagnets.

15. (new) The electromagnetic actuator according to claim 11, wherein said same total spring energy of each respective one of said two springs is given by an integral of said spring force over said spring travel of said respective one of said springs.

16. (new) A method of adjusting the electromagnetic actuator according to claim 11, comprising the steps:

a) while compressing a first one of said two springs through said spring travel thereof, measuring a first variation of a first said spring force of said first spring over said spring travel thereof;

b) while compressing a second one of said two springs through said spring travel thereof, measuring a second variation of a second said spring force of said second spring over said spring travel thereof;

c) from said first variation of said first spring force over said spring travel of said first spring,

determining a first spring energy stored in said first spring due to said compressing of said first spring through said spring travel thereof;

d) from said second variation of said second spring force over said spring travel of said second spring, determining a second spring energy stored in said second spring due to said compressing of said second spring through said spring travel thereof;

e) pre-stressing one or both of said springs in said actuator to thereby adjust at least one of said first spring energy and said second spring energy so that said first spring energy and said second spring energy will both be equal to said same total spring energy.

17. (new) The method according to claim 16, wherein said determining of said first spring energy in said step c) comprises integrating said first variation of said first spring force over said spring travel of said first spring, and said determining of said second spring energy in said step d) comprises integrating said second variation of said second spring force over said spring travel of said second spring.

18. (new) The method according to claim 16, wherein said respective integrating is a section-wise integrating over said respective spring travel.

19. (new) The method according to claim 16, further comprising a preliminary step of pre-stressing said first spring to a prescribed value, and wherein said step e) comprises pre-stressing said second spring so that said second spring energy of said second spring matches said first spring energy of said first spring that is pre-stressed to said prescribed value.

20. (new) The method according to claim 16, wherein said first variation of said first spring force differs from said second variation of said second spring force, and wherein, after said step e), a rest position of said armature with said two electromagnets de-energized is not at a geometric center of said spacing distance between said two electromagnets.

[RESPONSE CONTINUES ON NEXT PAGE]